



# Homestake DUSEL

## *Access, Users Support and Users Environment*

Kevin T. Lesko

April 20, 2007



South Dakota  
Science and Technol  
Authority






Homestake Mining  
Company




Administration Building  
630 East Summit Street

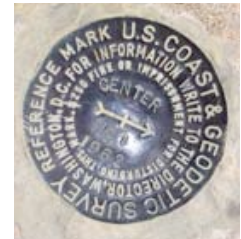


# Access to Homestake and the Underground

- Access to Homestake

- RAP current undergoing improvements & enlargements
-  increasing flights DEN RAP from 8 to 11/day, upgrading to EMB120's (50 seats up from 30)
-  increasing flights ORD RAP from 1 to 3/wk
-  additional flights in the summer (daily from ORD)
-  3/day from SLC
-  3/day from MSP

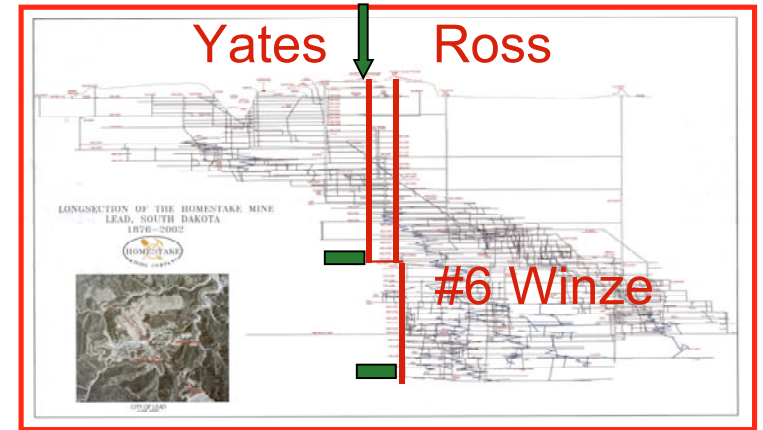
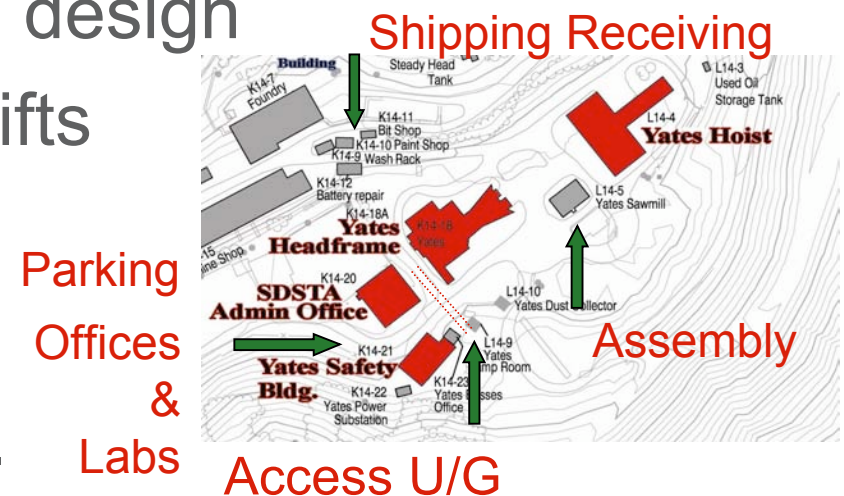
-  has not been closed in past 5 years
-  &  closed once in past 5 years



Geodetic Center of the US  
Belle Fourche, SD 57717

# Access to Homestake and the Underground

- Access to the Underground: Personnel
  - Connected and Integrated design
  - Automated, On-demand Lifts
  - Efficiency and Safety
  - Dedicated Access
  - Office/Lab - U/G < 15 min.



# Access to Homestake and the Underground

- Access to the Underground: Personnel & Equipment
  - Automated personnel hoist
  - Upgrades to freight lift
  - Potential to size/scale as required

## Existing Cage Dimensions and Capacities

### Yates Cage Hoist

Maximum cage dimensions: 1.4 x 3.7 x 2.2m high (side-by-side)  
(4' 8" x 12' 1.5" x 7' 2" high)

Maximum cage payload: 5,450 kg (12,000 lb), nominal  
5,900 kg (13,000 lb), allowable at half-speed.

### Ross Cage Hoist

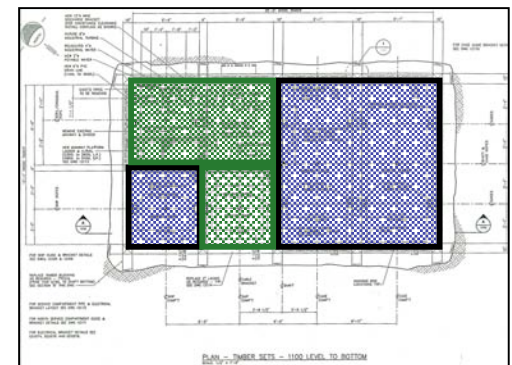
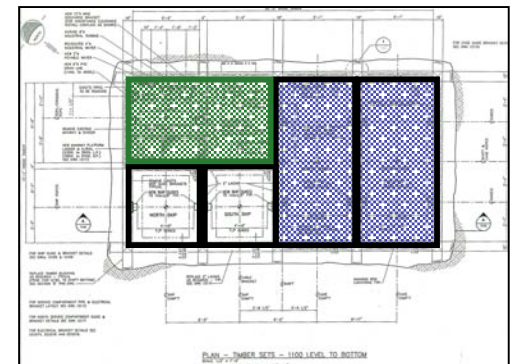
Maximum cage dimensions: 1.3 x 3.8 x 2.2m high (double deck)  
(4' 4-5/8" x 12' 5" x 7' 2" high)

Maximum cage payload: 5,450 kg (12,000 lb), nominal  
6,100 kg (13,400 lb), allowable at half-speed.

### #6 Winze Cage Hoist

Maximum cage dimensions: 1.3 x 3.7 x 2.2m high (double deck)  
(4' 4" x 12' 1-1/2" x 2.2m high)

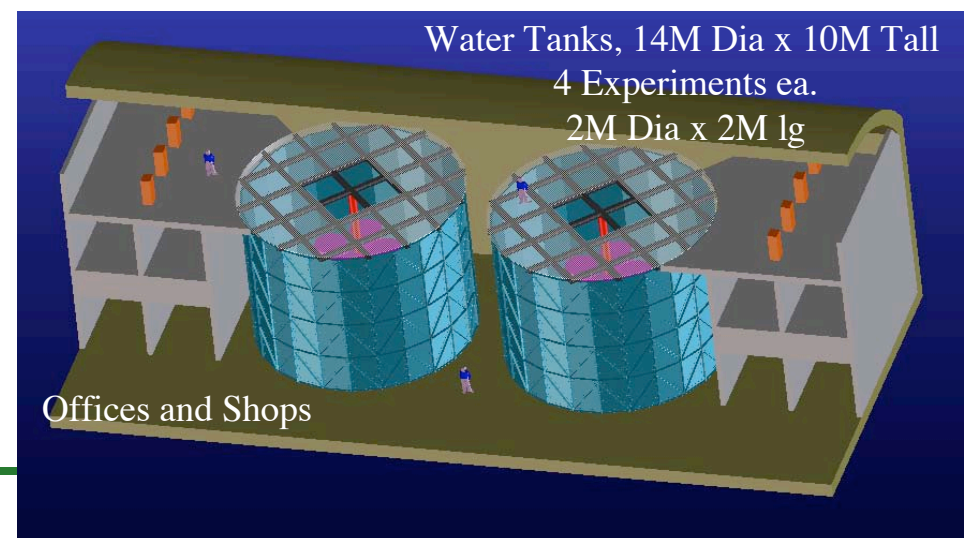
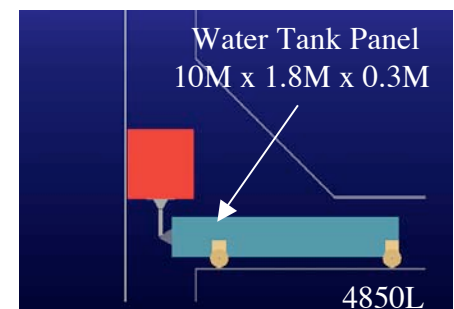
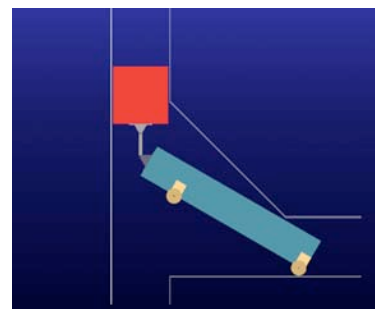
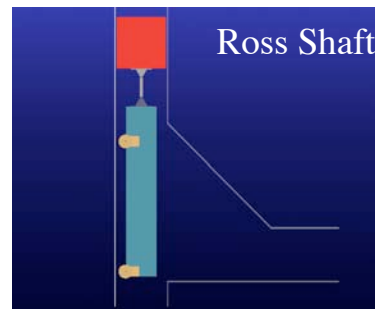
Maximum cage payload: 5,450 kg (12,000 lb), nominal  
6,400 kg (14,000 lb), allowable at half-speed.





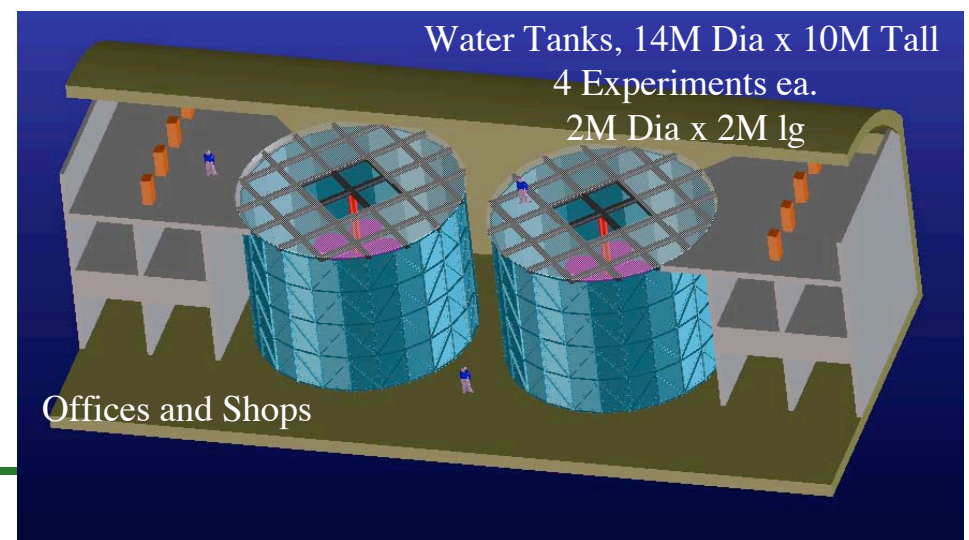
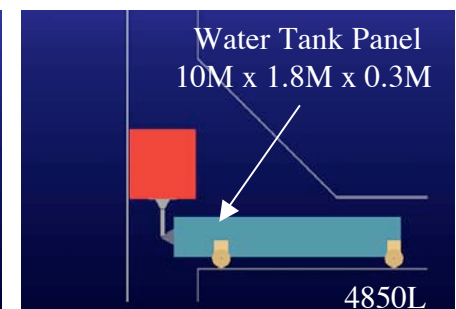
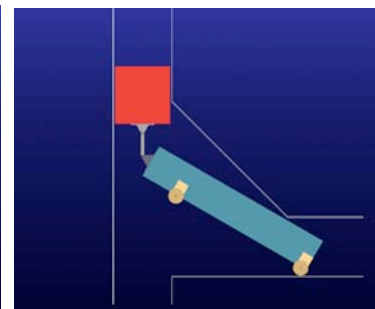
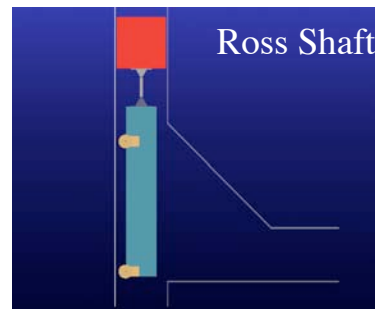
# Access to Homestake and the Underground

- Access to the Underground: Construction
  - Construction of large experiments, examples
  - Large construction capacities
  - Rock Hoisting 150tons/hour



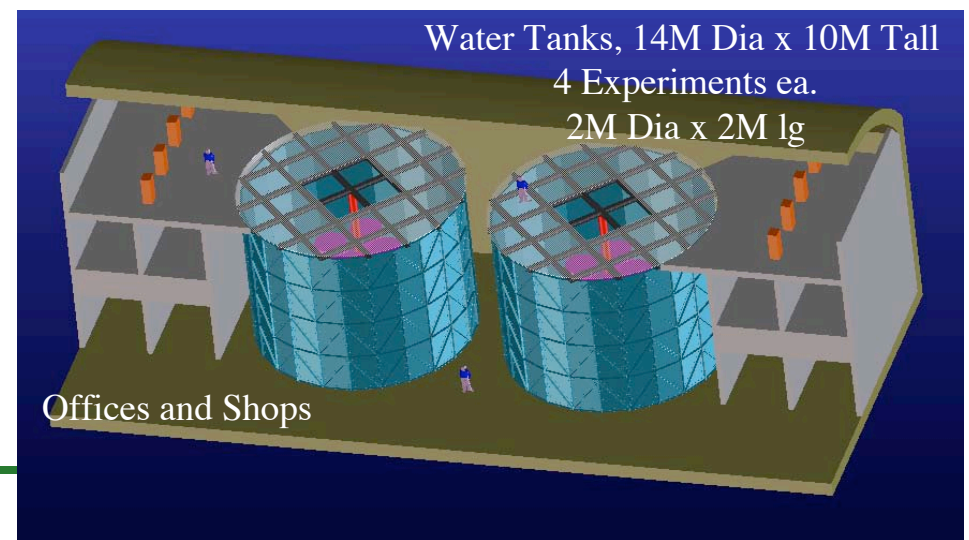
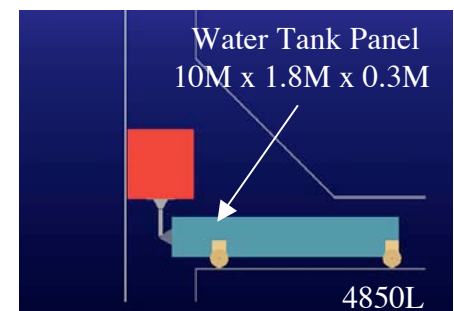
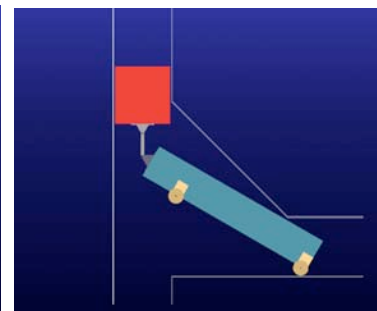
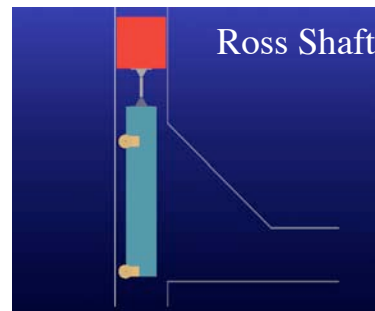
# Access to Homestake and the Underground

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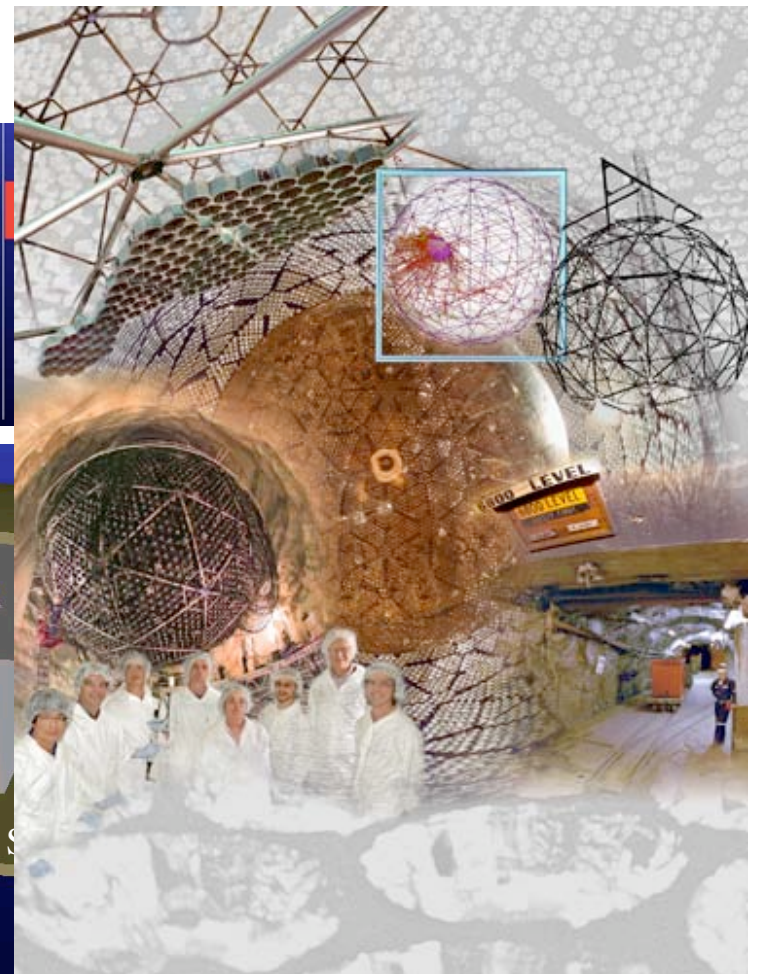
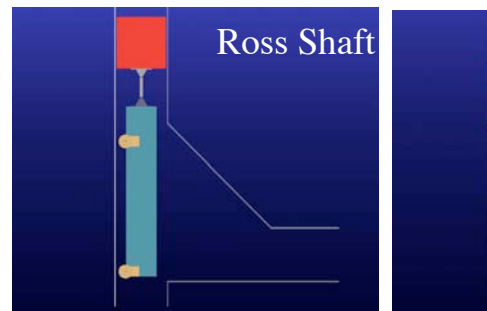
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# Access to Homestake and the Underground

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# Users' Environment

- Offices & Laboratories Onsite
- Facility Support Services
  - Shipping, receiving, transportation, engineering, training & safety
- Operations, Engineering, Liaison and Scientific Personnel
- Integrated Education & Outreach
- Integrated & Dedicated EH&S Program and Staff
- Design to Promote Synergism between Fields/Users
- Superior Internet Access
- Site Integrated into Nearby Community

# User Environment - at the site

- Workshops and Conferences
  - Black Hills ideal location for a new “Aspen” or “Erice”
- Strong Connections to Local Universities
  - SDSM&T, BHSU, USD, SDSU, ...
  - Regional University workshops
- Education & Outreach Opportunities
  - Native American
  - Rural US
  - Tourists
  - Existing ties to strong programs: CAMSE, QuarkNet, ...
- Visitor Center, Dining Facilities, Housing
  - Sanford Donation
- Local Culture